

PATENT SPECIFICATION

DRAWINGS ATTACHED

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902,447

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International Classification:—F061.

COMPLETE SPECIFICATION

Pipe Connector

We, L. HATHAWAY LIMITED, a British Company, of Pentre Wern, Gobowen, Near Oswestry, Shropshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a pipe-connector, for example, for interconnecting two pipe lengths or for attaching a nozzle, or the like, to a pipe-end, and the object of the invention is to enable a firm, sealing connection easily to be made.

According to the invention the pipe-connector includes a rigid sleeve of an internal diameter closely to engage over a pipe-end, the sleeve being provided adjacent one end with co-planar, chordwise, through-slots, in two opposite sides, to receive the limbs of a substantially U-shaped retainer such that the facing edges of the limbs engage in a peripheral groove in the exterior of the pipe-end to prevent axial separation of the sleeve and pipe-end, and the said facing edges have recesses which are arcuate about the sleeve axis and which resiliently engage corresponding arcs at the bottom of the groove in the pipe-end to locate the retainer in position.

According to a further feature, slight annular clearance between the sleeve and the overlapped portion of the contained pipe-end is sealed by an O-ring situated in a coaxial annular channel situate between the co-planar chordwise slots of the sleeve and the inner extremity of the pipe-end. Preferably, the annular channel is formed in the inner periphery of the sleeve.

When intended for interconnecting two pipe-ends the sleeve is provided with the co-planar slots adjacent each end.

It will be understood that the sleeve can be a straight, curved, or angular one.

In the accompanying drawings:—

Figure 1 is a side elevation, partly in section, illustrating one embodiment of the in-

vention in which the adjacent ends of two aligned pipes are to be sealingly interconnected; and

Figures 2 and 3 are sectional views taken respectively on the lines 2—2 and 3—3 in Figure 1.

According to the embodiment illustrated two pipe ends 10 and 11 are interconnected in alignment by a straight stainless steel sleeve 13. Adjacent each end, the sleeve has pairs of diametrically-opposite chordwise slots 14a, 14b and 15a, 15b which break through its bore, the slots of each pair being co-planar and adapted to receive the limbs 16, 16 of a substantially U-shaped resilient clip 17. The facing edges of the limbs of each clip have recesses which are arcuate about the sleeve axis as shown in Figures 2 and 3, and are for engaging in a peripheral groove 18 in the exterior of the associated pipe-end. Axially inwardly of each pair of slots, the sleeve 13 has an annular channel 19 in its inner periphery, and each channel houses a rubber O-ring 20 which sealingly engages the exterior of the adjacent pipe-end.

To break the connection with either pipe-end it is only necessary to withdraw the clip, and slide off the sleeve.

WHAT WE CLAIM IS:—

1. A pipe-connector including a rigid sleeve of an internal diameter closely to engage over a pipe-end, the sleeve being provided adjacent one end with co-planar, chordwise, through-slots, in two opposite sides, to receive the limbs of a substantially U-shaped retainer such that the facing edges of the limbs engage in a peripheral groove in the exterior of the pipe-end to prevent axial separation of the sleeve and pipe-end, and the facing edges of the limbs of the retainer having recesses which are arcuate about the sleeve axis and resiliently engage corresponding arcs at the bottom of the groove in the pipe-end to locate the retainer in position.

2. A pipe-connector, according to Claim 1,

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in which the slight annular clearance between the sleeve and the overlapped portion of the contained pipe-end is sealed by an O-ring situated in a coaxial annular channel situate between the co-planar chordwise slots of the sleeve and the inner extremity of the pipe-end.

3. A connector for the adjacent ends of two aligned pipes, substantially as described with reference to the accompanying drawings.

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PROVISIONAL SPECIFICATION

Pipe Connector

We, L. HATHAWAY LIMITED, a British Company, of Pentre Wern, Gobowen, Near Oswestry, Shropshire, do hereby declare this invention to be described in the following statement:—

15 The invention relates to a pipe-connector, for example, for interconnecting two pipe lengths or for attaching a nozzle, or the like, to a pipe-end, and the object of the invention is to enable a firm, sealing connection easily to be made.

20 According to the invention the pipe-connector includes a rigid sleeve of an internal diameter closely to engage over a pipe-end, the sleeve being provided adjacent one end with co-planar, chordwise, through-slots, in two opposite sides, to receive the limbs of a substantially U-shaped retainer such that the facing edges of the limbs engage in a peripheral groove in the exterior of the pipe-end.

30 Preferably, the said facing edges have recesses which are arcuate about the sleeve axis and which resiliently engage corresponding arcs at the bottom of the groove in the pipe-end.

35 According to a further feature, slight annular clearance between the sleeve and the overlapped portion of the contained pipe-end is sealed by an O-ring situated in a coaxial annular channel situate between the co-planar chordwise slots of the sleeve and the inner extremity of the pipe-end. Preferably, the an-

ular channel is formed in the inner periphery of the sleeve.

When intended for interconnecting two pipe-ends the sleeve is provided with the co-planar slots adjacent each end.

It will be understood that the sleeve can be a straight, curved, or angular one.

45 In one construction, in which two-pipe ends are to be interconnected in alignment, the sleeve is straight and formed of stainless steel. Adjacent each end, the sleeve has pairs of chordwise slots which break through its bore, the slots of each pair being co-planar and adapted to receive the limbs of a substantially U-shaped resilient clip. The facing edges of the limbs of each clip have recesses which are arcuate about the sleeve axis and are for engaging in a peripheral groove in the exterior of one of the pipe-ends to be interconnected. Axially inwardly of each pair of slots, the sleeve has an annular channel in its inner periphery, and each channel houses a rubber O-ring which sealingly engages the exterior of the adjacent pipe-end.

60 To break the connection with either pipe-end it is only necessary to withdraw the clip, and slide off the sleeve.

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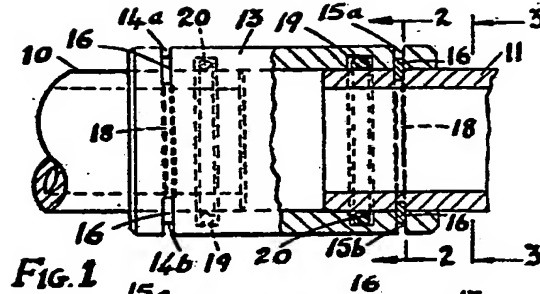


FIG. 1

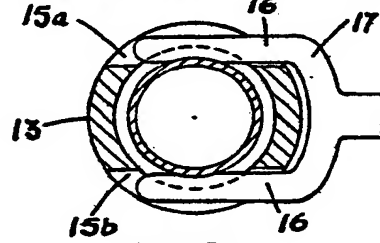


FIG. 2.

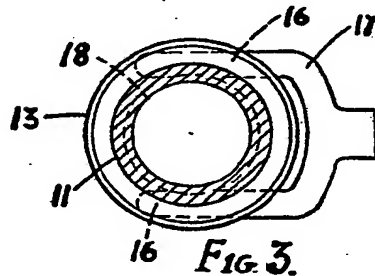


FIG. 3.

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